

WHAT IS CLAIMED IS:

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1 1. A computer readable recording medium recording  
2 thereon a program, which causes a computer to execute:  
3 a process operation for storing a print command  
4 converted from print data into a memory;  
5 a process operation for reading the stored print  
6 command to transmit the read print command to a printing  
7 apparatus; and  
8 a process operation for rendering a storage area of  
9 said memory where said print command has been stored,  
10 rewritable when said print command is read out.

1 2. A recording medium as claimed in claim 1 wherein:  
2 said recording medium records thereon a program for  
3 causing said computer to execute a process operation by  
4 which data for controlling read/write operation of a print  
5 command to said memory is produced, and said control data  
6 is stored into another storage area of said memory.

1 3. A recording medium as claimed in claim 2 wherein:  
2 said recording medium records thereon a program  
3 containing a size of said memory and a data amount  
4 presently stored in said memory as said control data.

1 4. A recording medium as claimed in claim 2 wherein:

2        said recording medium records thereon a program  
3        containing information indicative of a position within said  
4        memory where said print command is stored as said control  
5        data.

1        5.        A recording medium as claimed in claim 1 wherein:  
2                said recording medium records thereon a program for  
3        causing the computer to further execute;  
4                a process operation for acquiring an index  
5        indicative of a stored amount of said print command within  
6        said memory; and  
7                a process operation for stopping a process operation  
8        for storing said print command into the memory when said  
9        index is larger than, or equal to a first preset threshold  
10       value.

1        6.        A recording medium as claimed in claim 5 wherein:  
2                said recording medium records thereon a program for  
3        causing the computer further to execute:  
4                a process operation for stopping a process operation  
5        for reading said stored print command when said index is  
6        smaller than, or equal to a second preset threshold value.

1        7.        A recording medium as claimed in claim 1 wherein:  
2                said recording medium records thereon a program for  
3        causing the computer to further execute.

4 a process operation for acquiring an index  
5 indicative of a stored amount of said print command within  
6 said memory; and

7 a process operation for stopping a process operation  
8 for reading said stored print command when said index is  
9 smaller than, or equal to a second preset threshold value.

1 8. A recording medium as claimed in claim 1 wherein:

2 said recording medium records thereon a program for  
3 causing the computer further to execute:

4 a process operation for storing said converted print  
5 command into a file having such a nature that a print  
6 command is saved until a print job is ended, when a print  
7 job contains an instruction for printing plural sheets of  
8 the same page.

1 9. A recording medium as claimed in claim 8 wherein:

2 said recording medium records thereon a program for  
3 causing the computer further to execute:

4 a process operation for storing, when said print  
5 command cannot be saved in said file, the not-yet-saved  
6 print command into said memory.

1 10. A printing control method for controlling writing  
2 and transmitting of a print command, which comprises:

3 a process operation for storing a print command

4 converted from print data into a memory;  
5 a process operation for reading the stored print  
6 command to transmit the read print command to a printing  
7 apparatus; and  
8 a process operation executed for rendering a storage  
9 area of said memory where said print command has been  
10 stored rewritable when a print command is read out.

1 11. A printing control method as claimed in claim 10  
2 which further comprises:

3 a process operation for acquiring an index  
4 indicative of a stored amount of said print command within  
5 said memory; and

6 a process operation for stopping, when said index is  
7 larger than, or equal to a first preset threshold value,  
8 such a process operation for storing said print command  
9 into the memory.

1 12. A printing control method as claimed in claim 11  
2 which further comprises:

3 a process operation for stopping, when said index is  
4 smaller than, or equal to a second preset threshold value,  
5 such a process operation for reading said stored print  
6 command.

1 13. A printing control method as claimed in claim 10

2 which further comprises:

3 a process operation for storing, when a print job  
4 contains an instruction for printing plural sheets of the  
5 same page, said converted print command into a file having  
6 such a nature that a print command is saved until a print  
7 job is ended.

1 14. A printing control method as claimed in claim 13  
2 which further comprises:

3 a process operation for storing, when said print  
4 command cannot be saved in said file, said not-yet-saved  
5 print command into said memory.

1 15. A printing control apparatus for controlling  
2 writing/transmitting operations of a print command,  
3 comprising:

4 means which stores a print command converted from  
5 print data into a memory;

6 means which reads the stored print command to  
7 transmit the read print command to a printing apparatus;  
8 and

9 means which renders, when a print command is read  
10 out, the storage area of said memory where said print  
11 command has been stored rewritable.

1 16. A printing control apparatus as claimed in claim 15,

2 further comprising:

3 means which acquires an index indicative of a stored  
4 amount of said print command within said memory; and

5 means which stops, when said index is larger than,  
6 or equal to a first preset threshold value, such a process  
7 operation for storing said print command into the memory.

1 17. A printing control apparatus as claimed in claim 16,  
2 further comprising:

3 means which stops, when said index is smaller than,  
4 or equal to a second preset threshold value, such a process  
5 operation for reading said stored print command.

1 18. A printing control apparatus as claimed in claim 15,  
2 further comprising:

3 means which stores, when a print job contains an  
4 instruction for printing plural sheets of the same page,  
5 said converted print command into a file having such a  
6 nature that a print command is saved until a print job is  
7 ended.

1 19. A printing control apparatus as claimed in claim 18,  
2 further comprising:

3 means which stores, when said print command cannot  
4 be saved in said file, the not-yet-saved print command into  
5 said memory.

1 20. A computer readable recording medium for recording  
2 thereon a program for causing a computer to execute:  
3 a converting/storing process operation for  
4 converting print data into a print command having a  
5 predetermined format and for storing the converted print  
6 command into a first memory;  
7 a first stopping process operation for stopping said  
8 converting/storing process operation in the case that a  
9 ratio of a print command amount stored into said first  
10 memory to a storage capacity of said first memory is larger  
11 than, or equal to a first threshold value;  
12 a reading/storing process operation for reading said  
13 stored print command and for storing said read print  
14 command into a second memory;  
15 a transmitting process operation for transmitting  
16 the print command stored into said second memory to a  
17 printing apparatus;  
18 a releasing process operation for executing a  
19 process operation such that a storage area of said first  
20 memory from which said print command is read is rewritable;  
21 a second stopping process operation for stopping  
22 said reading/storing process operation in the case that a  
23 ratio of a print command amount stored into said first  
24 memory to the storage capacity of said first memory is  
25 smaller than, or equal to a second threshold value; and  
26 a third stopping process operation for stopping said

27 reading/storing process operation in such a case that a  
28 ratio of a print command amount stored into said second  
29 memory to a storage capacity of said second memory is  
30 larger than, or equal to a third threshold value.

1 21. A printing control method comprising:

2 a converting/storing step for converting print data  
3 into a print command having a predetermined format and for  
4 storing said converted print command into a first memory;

5 a first stopping step for stopping said  
6 converting/storing step in the case that a ratio of a print  
7 command amount stored into said first memory to a storage  
8 capacity of said first memory is larger than, or equal to a  
9 first threshold value;

10 a reading/storing step for reading said stored print  
11 command and for storing said read print command into a  
12 second memory;

13 a transmitting step for transmitting the print  
14 command stored into said second memory to a printing  
15 apparatus;

16 a releasing step for executing a process operation  
17 such that a storage area of said first memory from which  
18 said print command is read is rewritable;

19 a second stopping step for stopping said  
20 reading/storing step in the case that a ratio of a print  
21 command amount stored into said first memory to the storage



22 capacity of said first memory is smaller than, or equal to  
23 a second threshold value; and  
24 a third stopping step for stopping said  
25 reading/storing step in such a case that a ratio of a print  
26 command amount stored into said second memory to a storage  
27 capacity of said second memory is larger than, or equal to  
28 a third threshold value.

1 22. A printing control apparatus comprising:  
2 converting/storing means which converts print data  
3 into a print command having a predetermined format and for  
4 storing said converted print command into a first memory;  
5 first stopping means which stops said  
6 converting/storing means in the case that a ratio of a  
7 print command amount stored into said first memory to a  
8 storage capacity of said first memory is larger than, or  
9 equal to a first threshold value;  
10 reading/storing means which reads said stored print  
11 command and for storing said read print command into a  
12 second memory;  
13 transmitting means which transmits the print command  
14 stored into said second memory to a printing apparatus;  
15 releasing means which executes a process operation  
16 such that a storage area of said first memory from which  
17 said print command is read is rewritable;  
18 second stopping means which stops said

19 reading/storing means in the case that a ratio of a print  
20 command amount stored into said first memory to the storage  
21 capacity of said first memory is smaller than, or equal to  
22 a second threshold value; and

23         third stopping means which stops said  
24 reading/storing means in such a case that a ratio of a  
25 print command amount stored into said second memory to a  
26 storage capacity of said second memory is larger than, or  
27 equal to a third threshold value.